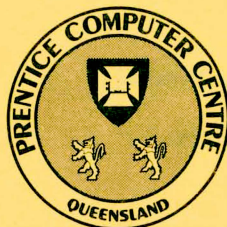


PRENTICE COMPUTER CENTRE

UNIVERSITY OF QUEENSLAND, ST. LUCIA, QUEENSLAND, AUSTRALIA 4067.



NEWSLETTER

N-310

November 1986

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Authorized by the Director of the Computer Centre

Phone Numbers for Enquiries

External users may dial direct by prefixing these extension numbers with 377.

Principal Service Centres	Extension
Contract Programming & Feasability Studies	3944
System Status Automatic Answering	3101
General Enquiries & Course Enrolments	3018
Dial-up modem numbers	(300 bps) 377 2977 (1200 bps) 377 2922 (1200/75 bps) 377 2655

Service Advice and Problem Reporting	Mail Box	Extension
Central Services HELP Desk (0830-1630)	CCHELP	3025
Program Librarian		3943
Distributed Computing and Network HELP Desk	CCDCHELP	3938
Accounts (0830-1630)		2188
Operations		3212
Data Entry		3967

Engineering and Maintenance

Development and Communications	ENGIN
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Management

Director	2189
Deputy Director	3017
Manager, Applications Development	3944
Manager, Central Computing Facilities	4017
Manager, Distributed Computing	3944
Manager, Engineering and Communications Services	3288
Manager, Finance and Administration	3288

Griffith University

External users may dial direct by prefixing these extension numbers with 275.

Consulting	7796
Computer Services	7560
Computing Co-ordinator	7561

1.0 NEWSLETTER SUMMARY

Earlier this year two new printers were installed on the IBM 3083 and this newsletter has been produced using these printers. The cover was produced on the 4250 electro-erosion printer which gives typeset quality masters and the body of the newsletter on the 6670 laser printer.

The 6670 is now available for general use and the 4250 will be released shortly.

- The text processing software and the facilities of the 6670 laser printer are described.
- APL2, GPSS-V and LISP/VM are now available for evaluation on the IBM 3083.
- Due to increased costs charges for phototypesetting have increased.
- The Language Sensitive Editor is now available on the VAX.
- A new version of 1022 is available for testing on NEWD: on the KL-10.
- An advice hotline is now available for users of LOTUS software.
- The correct number for the 300 bps dial-in modems is 377 2977.
- Details of a number of data bases, accessible via AUSTPAC are given.
- The next course schedule is listed.
- Users are advised of the automatic expiration of PPN's on the KL-10 and UIC's on the VAX and consequential deletion of files on December 24th unless prior action is taken.

Director
Extension 2189

2.0 CENTRAL COMPUTING FACILITIES - Allan Woodland, ext 4017

- Operations - Sandra Campbell, ext. 3471
- Systems Software & Extensions - Ian Burgess, ext. 4074

2.1 Text Processing on the IBM 3083

The IBM Document Composition Facility (DCF) text formatter (generally known as SCRIPT or SCRIPT/VS) is IBM's general-purpose text formatter for mainframe systems.

DCF markup is somewhat similar to RUNOFF, and provides a common markup language across a wide range of output devices.

SCRIPT/VS is a text processing program that provides facilities for manuscript preparation, text markup, page markup, and printing.

SCRIPT/VS facilities include:

- Text positioning and alignment

- Hyphenation and spelling verification in several languages.
- Proportional horizontal and vertical justification on appropriate devices
- Multi-Column formatting
- Table of contents generation
- Index generation
- Footnote generation
- Running headings and footings
- Highlighted phrases
- Revision code generation (multi-level)
- Box drawing
- Multiple input files
- Conditional (logic) processing
- Symbol and Macro processing
- Widow line control

Additionally, DCF permits text and graphics to be easily merged for output to a suitable device such as the 4250 printer.

Output devices supported by SCRIPT/VS include:

- Terminals, including ASCII screens connected via the YALE front-end.
- Line printers, such as the IBM 3203 system printer, which can print dual-case output only in fixed line and character spacing. This is suitable for draft or high volume output.
- The IBM 6670 is a laser printer capable of producing high quality double or single sided A4 copy from any UQVM disk file. Formatted documents, like this newsletter, can be printed by "marking-up" the document with DCF (Document Composition Facility) tags and saving it in a file whose file type is "SCRIPT". When this script file is printed the 6670 QPRINT procedure will invoke the DCF processor to produce the desired format in the printed document. (See the later article "Laser Printing on the IBM 6670" for more detail on use of the printer).

Listings of unformatted documents can be produced equally well. If printed double sided the cost for this type of output is reasonable. Documents with long line lengths (up to 132 characters) are printed sideways on the A4 stationery.

The principal benefits of using the 6670 are:

1. Produces high quality output.
2. Saves document preparation time by avoiding the necessity to produce a master suitable for photocopying for medium volume documentation (eg 1-50 copies of a 1-10 page document).

The body of this newsletter was produced on the 6670 using the "Document" and "Document-Bold" fonts.

- The IBM 4250 is an electro-erosion printer capable of producing very high quality output which can be used as a master for printing. The 4250 uses a special paper with a black lacquer layer covered by a very thin aluminium surface coating. The electro-erosion process vapourises the aluminium exposing the black backing material.

The printout created is of a high density (600 points per inch) and is "all points addressable" which allows the printing of both text and graphics (separate or combined). This printer also supports a large selection of fonts of varying sizes and styles (33 styles available on UQVM each with numerous sizes).

The front cover, telephone index page and "Change of Project" forms pages of this newsletter have been produced on the 4250 using the "Monotype Times New Roman" font.

Details regarding usage and prices for the 4250 will be included in the next issue of the PCC Newsletter.

2.1.1 Commands for using DCF

The following commands, which are both described later in this newsletter, are used to format documents:

- The "QPRINT" command is available to assist users in formatting DCF documents for the IBM 6670 laser printer only.
- The "DCF" command is used to format documents for all other output devices.

John Noad
Extension 3017

2.1.2 Laser Printing on the IBM 6670

The 6670 has somewhat more intelligence than the conventional line printers. It has internal text formatting capabilities. This formatting is controlled by the inclusion of OCL (Operator Control Language) commands in the text of the document to be printed. The user is relieved of the task of learning yet another set of commands by the IBM program offering "IBM 6670 Usability Aid" or "QPRINT" as it will be referred to in future. QPRINT allows the 6670 to be used in much the same way as any other printer except that it provides the user with a means of interactively (via QPRINT menu options) varying document format. These options are passed as appropriate parameters for the 6670 preprocessor which scans the document and inserts the appropriate OCL to produce the desired format on the 6670.

Any kind of document ranging from program listings to SCRIPT files can be printed on the 6670. When QPRINT is invoked on a file whose type is "SCRIPT" QPRINT automatically invokes SCRIPT/VS with the appropriate parameters to produce a file suitable for 6670 preprocessing. There are currently 70 fonts available on the laser printer details of which can be obtained from the online help information. Any four ROM fonts plus two additional Library fonts can be used in a 6670 document.

QPRINTing Files: The QPRINT programs are run in the users' own Virtual Machine so all that is required is a 1M machine and a link to the system disk containing the QPRINT programs. All users have these facilities.

QPRINT is invoked like any other CMS command, either as a prefix command from the FILELIST prefix zone or on the command line by specifying "QPRINT fn [ft [fm]] [(options)]" or simply "QPRINT". However the former prefix command is recommended at least initially as this will present the user with a menu of options containing defaults chosen by the system for the document against which QPRINT has been invoked. When the user is happy with the QPRINT options selected, all that is necessary is to press enter and the document will be printed.

Further Information: Access to the QPRINT user manuals, as well as any further assistance can be obtained via Computer Centre Help Desk. Online Help is available on all the options from the QPRINT menu or by typing "QPRINT ?" on the CMS command line.

6670 Printer Charges: Laser printing charges will have two elements - a paper cost per sheet plus a printing cost per printed A4 side. Thus, if you choose the "sides-2" option the paper element of the charge will be halved.

PAPER A4 sheets: \$0.14.

PRINTING A4 printed side: \$0.06

For example a five page document would be costed as follows:

	PAPER (sheets)	PRINTING (sides)	PAPER COST(\$)	PRINTING COST(\$)	TOTAL COST(\$)
SINGLE	5 + 1	5 + 1	0.84	0.36	1.20
DOUBLE	3 + 1	5 + 1	0.56	0.36	0.96

Edward Lindsay
Extension 3022

2.1.3 Document Composition Facility (DCF)

For output devices other than the IBM 6670 laser printer, a full-screen menu system (similar to QPRINT) has been developed for DCF to assist users with formatting parameters and options.

The new command "DCF" supports all DCF options, and provides several additional options to permit the user to specify (for example) the form type and number of copies to be printed (without being concerned with the subtleties of the CP SPOOL command).

The DCF command also permits the user to imbed DCF options in the input file by including a DCF "comment" line at the start of the file, specifying the options to be used. Specific options can be associated with a SCRIPT file, and be used automatically each time the file is formatted. Any text following the keyword string "DCF OPTIONS:" in comment lines at the start of the file will be used as DCF options. See the "DCF INFO" file for more details on this facility.

To use the DCF front-end, you simply enter the "DCF" command and "fill in the blanks", or else enter the DCF command with a fileid and options

specified. For specific assistance with filling in any field on the menu, you can position the cursor on that field and press the "HELP" key (PF1), or else simply enter a question mark in the field.

As the list of options is very extensive, they are documented online in the "DCF INFO" file, which can be viewed by issuing the command "DCF ?".

Arthur Pool
Extension 2952

2.2 APL2 available on the IBM 3083 (UQVM)

IBM's APL2 is an implementation of the APL language representing a significant advance over previous IBM APL products.

APL2 is now available for evaluation, and the YALE-Series/1 front-end systems have been tailored to support the APL character set for the TATUNG 6600 terminals (with APL feature fitted). If you have a video terminal with APL capability, and want to use APL2, please contact the Computer Centre to see if your terminal can be used.

Highlights:

- Provides access to SQL/DS data bases.
- Offers a new advanced level of the APL language featuring the use of "generalised arrays".
- Provides two associated processors that allow routines written in FORTRAN, Assembler or REXX* to be called from APL2 applications. All of these languages are available for use on the IBM 3083 system.
- Provides a new full-screen editor for editing APL functions, as well as variables (character vectors or matrices).
- Extends access to system editors such as XEDIT to be used for APL2 editing.
- Allows APL2 applications to be invoked from user applications.

Primary Users:

- Financial planners, analysts, engineers, statisticians and other professionals

Potential Benefits:

- Enables users to store, select and manipulate large amounts of data concisely and consistently to enhance statistical analyses and business reports.
- Enables both business and scientific application users to deal with problem elements -- not programming details.
- Eases the task of copying and combining existing programs to solve new problems.
- Encourages the use of application building blocks and common tools that can yield significant productivity gains.

- Offers the programmer a shortcut means to draft a prototype of an application before investing in a traditional program development project.

References:

SH20-9227 APL2 Programming: Language Reference

SH20-9218 APL2 Programming: System Services Reference

SH20-9220 APL2 Programming: Messages and Codes

SX26-3738 APL2 Reference Card

SH20-9215 APL2 Migration Guide

APL2 requires a 1MB VM/SP virtual machine to operate. A larger virtual machine may be required for users with large program or data requirements.

* REXX - the VM/SP System Product Interpreter - is one of three high-level interpretive languages available on the IBM 3083 for writing command procedures (EXEC's).

Arthur Pool
Extension 2952

2.3 General Purpose Simulation System-V available on UQVM

GPSS-V is now available for evaluation on the IBM 3083 system (UQVM).

The General Purpose Simulation System V (GPSS-V) is a tool for modelling the behaviour of systems in the engineering and management science area. Many applications of a complex logical and procedure oriented nature can be described and studied using GPSS-V. Varying environments may be introduced to enable the user to explore alternatives and identify capacity limitations. Both environment and activities may have random variations.

Main Purpose:

- GPSS is a generalised simulation program that helps evaluate proposed systems, methods, processes and designs. With GPSS, the user no longer needs to develop a unique program for each simulation effort.

Key Functions, Facilities and Features:

- Utilises a series of unique-language statements describing the environment to be simulated.
- GPSS output produces a model of the input parameters.
- Output consists of standard statistics derived from conditions occurring during the simulation run printed in tabular form.
- Provides transaction priorities, and logical or conditional tests.
- Random number generators are available for creation of proper distribution mix of transactions.
- Requires no previous programming experience.

Potential Benefits:

- Helps detect weak areas in the system.
- Highlights areas in the system that have been overly emphasised or compensated for.
- Allows the user to predict system performance under a wide variety of conditions for whatever span of time needed.
- The simulation model should help analyse stock, and peak and normal period performance.
- The model can demonstrate the impact of out-of-service equipment and test the effectiveness of backup and recovery procedures.
- Effects of change can be measured without incurring substantial cost, risk or losses because no physical implementation is involved.

References:

SH20-0866 GPSS-V Introductory User's Manual

SH20-0851 GPSS-V User's Manual

The following sample problems are provided and are available online:

SAMPLE computer system simulation provided with GPSS-V.

HARBOUR ship/pier system from the Introductory User's Manual p11.

JOBSHOP manufacturing job shop model from the Introductory User's Manual p33.

These sample problems can be viewed by entering "FILELIST * GPSS *" and using the "BROWSE" command to examine the resulting list of files.

GPSS-V will operate in a 1MB VM/SP virtual machine.

Arthur Pool
Extension 2952

2.4 LISP/VM is available for evaluation on UQVM

IBM LISP/VM is a general purpose, high-level language for use in artificial intelligence, expert systems, symbolic and natural language processing, and other advanced applications.

It provides a development environment with tools for the creation and maintenance of LISP/VM programs and data.

This development environment includes both a LISP/VM interpreter and semantically equivalent LISP/VM compiler.

Highlights:

- Provides a collection of tools to simplify the task of creating, debugging, maintaining, and executing LISP programs.

- The user can observe a program as it is executing and dynamically specify the type of debugging information displayed.
- Wide range of error recovery capabilities, including the ability to interrupt and resume execution of program loops in both compiled and interpreted code.
- Supports a wide variety of data types and heterogeneous mixes of data types.
- Aid to convert MACLISP programs to LISP/VM programs.

LISP/VM requires a VM/SP virtual machine at least 2MB in size. A size of 3MB or more may be required for advanced users.

Reference Material:

SH20-6476 LISP/VM Program Description/Operations Manual

SH20-6477 LISP/VM User's Guide

Arthur Pool
extension 2952

2.5 Expiry Date on Project Programmer Numbers

On 24 December each year all PPN's on the DEC-10's and UIC's on the VAX expire, unless the Centre has been notified in writing that a PPN/UIC is required for another year. The term "expire" means that all files owned by that PPN, both on-line and off-line, are deleted, any balance of commitment is taken to 0 and PPN and charge code are deleted from the system.

As you can imagine then, it is imperative that if you intend to keep using your account for the following year you must complete the "change of expiry date" form, prior to 24 December each year. Separate forms for KA/KL and VAX users are at the Accounts office and attached here.

We do this not to make life difficult for you, but merely to keep disk space clear and overheads down. Each year many people leave the University, go away on the Special Studies Programme or finish post graduate research and omit to notify us that they have finished with their account. Expiring accounts is our way, then, of keeping the system operating efficiently for the user's continued benefit.

Carol Walker
Extension 2188

2.6 Phototypesetter Costs

Over the past 12 months there have been significant increases in the costs of bromide film, developer and fixer used in conjunction with the Compugraphics phototypesetter. We have absorbed these increases until now but unfortunately can no longer do so. From December 1, 1986 the charge for typeset output will increase to 0.6 cents/mm of film.

Allan Woodland
Extension 4017

2.7 Attention VAX Users

A LANGUAGE SENSITIVE EDITOR is now available on the VAX 11/780. The EDITOR supports the following languages:

PASCAL
COBOL
FORTRAN
C

To call up the editor use the format:

`$LSEdit [/qualifiers] [file-spec]`

A help file and a User's Guide are available as well, by issuing the commands:

`$ HELP LSE` or
`$ PRINT SYS$DOC: LSEUG.MEM`

For any further information please contact the HELP desk.

Help Desk
Extension 3025

2.8 Attention 1022 Users on the KL

The current version of 1022 will expire on December 31, 1986. A new version 117B, has been supplied by Software House and installed on NEWD: . For a list of the documentation available, type `HELP NEWD: 1022`.

Some of the new features of 1022 version 117B are:

- Support for the Large Data Sets Module (LDS), which extends the number of allowable records in a system 1022 data set to over 134,000,000 and allows data sets to be distributed over multiple devices through the use of auxiliary files.
- Significant enhancements to the INIT and PRINT commands, which enable the user to create files in Data Interchange Format (DIF) and LOTUS 1-2-3 worksheet (WKS) format from within System 1022 and to write 1022 data directly to them. These files can then be down-loaded to a personal computer with any of the standard communications packages.

- Wildcard matching in the FIND, SEARCH and SELECT commands. Six wildcard characters allow the user to form selection sets based on partial text attribute values.
- Record-level locking. Users can now request exclusive access to individual records and user-defined operations, reducing contention in the data set.
- Debugging tools for PL1022 and report programs. A set of commands similar to those of COBDDT that allow the user to set and clear breakpoints, display and alter values as the program executes.
- Support for user-written host language routines that allow data from external files in formats other than ASCII, ASCII ISAM, SIXBIT, and SIXBIT ISAM to be used as input to the LOAD, APPEND and TRANSACT commands.

If you require more information, please contact the HELP desk.

Help Desk
Extension 3025

3.0 DISTRIBUTED COMPUTING - Geoffrey Dengate, ext 3391

3.1 LOTUS Hotline

Imagineering, the Australian distributors of LOTUS Corporation software products provide telephone support for LOTUS software products (eg LOTUS 1-2-3, Symphony).

Owners of LOTUS products can call the number below during business hours for advice or assistance on these software packages.

LOTUS Hotline - phone (02) 663 3941.

Geoffrey Dengate
Extension 3391

4.0 ENGINEERING AND COMMUNICATIONS SERVICES - Graham Rees, ext 3391

4.1 Dial-In Modems

For some time now the published number for the 300bps dial-in modems has been incorrect. It is 377 2977 and not 3977 as published.

Graham Rees
Extension 3288

4.2 Data Base access via AUSEPAC

Data bases in the following list can be conveniently accessed Via the PCC AUSEPAC gateway to AUSTPAC.

For more information you should contact the service involved directly. Clients must arrange their own accounts with the Data Base supplier.

AUSTPAC charges debited to your UQKL10 account are as follows:

Connect time charges - \$0.30 per hour

Traffic - \$0.08 per segment (a segment is from 1 to 64 chars.)

Note that connect time charges via the AUSEPAC gateway are one tenth compared to dialling AUSTPAC directly.

Call Procedures:

1. From the MICOM:

```
SELECT HOST auspac <cr>
```

```
GO
```

```
Connecting to AUSEPAC
```

```
University of Queensland Gateway to the world
```

```
Node AUSEPAC(22) V10(157/0).27 May 86
```

```
[To return to the DECsystem10 type
```

```
SET HOST UQKL10 <cr>]
```

```
[AUSEPAC(22)]CMD> call <data-base name>
```

```
(as listed below under "Access:")
```

2. From UQKL10

```
.SET HOST auspac <cr>
```

```
(you do not have to be logged in)
```

The use of the MXMIC utility on disk structure UTI: is useful in capturing any information for later printing.

3. From UQVAX or other DECnet host.

```
>R RTX <cr>
```

```
SET HOST AUSEPAC <cr>
```

4. This service is not available directly from the IBM system.

Data Base: National Library of Australia.

Operators: Australian MEDLINE Network.

Contact: Sandra Henderson (062) 621523
Access: Call MEDL
Service: MEDLINE is administered by the National Library and Dept. of Health and offers a range of medical and health related data bases serving users ranging from University Libraries to individual practitioners and researchers. Enquiries can either be clinically orientated or enquiries useful in keeping researchers up-to-date with current developments in their field and providing regular listings of research reports.
Charges: Training costs \$200 plus a set of search guides @ \$130 for the first year and \$65 thereafter. End user courses also available @ \$75.
 Connect charges - \$25 per hour and offline printing 8 cents per citation.

Data Base: CLIRS
Operators: Computerised Legal Information Retrieval System,
 Level 39, MLC Centre, Martin Place, SYDNEY 2000
Contact: Judith Burnet (02) 233-1955
 Lyn Pollock - Account Executive.
Access: Call CLIRS
Service: CLIRS is a comprehensive electronic law library containing many data bases on ie. legislations, Case law, Digests and Findings lists, legal practice notes, Company and Financial practice, Land Titles, Mineral Resources, training materials etc. These data bases have powerful retrieval and search facilities ie. on Catchwords.
 CLIRS offers free training and user reference manuals updated monthly, free access to any new data base for first month of release, toll free 24hr Hotline service, free AUSPAC charges, free market support on request and CLIRS enhancements.
Charges: Monthly service charge \$40
 Connect time per hour \$95

Data Base: Information Express.
Operators: Agridata Australia Pty Ltd. 1155 Malvern Road, MALVERN VIC 3144
Contact: Susan Collins (Sales Coordinator) 008-338806 (Toll Free)
Access: Call INFOX
Service: Information Express (IE) provides up to the minute information from national and international sources. This

information includes - news headlines, commodity prices, weather, stock market prices, futures prices and specialised data from institutional providers. This service is useful for those particularly interested in up-to-the-minute perishable information. This data base has powerful search commands and fast retrieval.

Charges: Educational Institutions: -

Single Subscription \$300 pa.

Multiple Subscription \$500 pa. + \$100 per terminal (no limit)

Connection time charges:

300 baud 27cents per minute

1200 baud 54cents per minute

Data Base: Australian Bibliographic Network (ABN)

Operators: National Library of Australia, PARKES ACT 2600

Contact: Dr Warwick Cathro (062) 621546

Ms Bryony Wilcox (User Support) (062) 621690

Access: Call ABN

Service: ABN provides a national on-line service accessing a data base of over 3 millions records of up-to-date information which describes books, journals, films, maps, sound recordings and other library materials, also where these items may be found in Australian libraries. This data base may be searched on-line by subject, title, keywords, author, series etc. during periods - Monday 9am - 7pm AEST and Tuesday to Friday 8.30am - 7pm AEST.

Charges: There is no joining fee for ABN or a minimum charge. Costs are -: 17cents per minute over the connect time plus 25cents per command. Bills are charged monthly unless less than \$20 which is charged at the end of the financial year.

Data Base: AUSINET

Operators: ACI Computer Services,
541 Blackburn Road, MT. WAVERLEY VIC

Contact: Leigh R. Baker (03) 5436166

Access: Call ACI

Service: AUSINET a National on-line information retrieval service provides access to more than 30 data bases containing Australian full text, bibliographic and numeric information ranging from Accounting to Zoology. Key full text data bases include The Australian Financial Review, the CCH Case

Digest Library and QTECH - QTECH being a data base of technological inovations which have been or are being developed in Queensland. QTECH is useful to a wide range of people involved in technology and can be searched rapidly by the user on any topic of interest.

Primary users of AUSINET include corporate libraries and information centres, government and academic libraries.

Charges: There are two levels of charging ranging from \$40 per month to \$120 per month according to information service required. Connect charges to various data bases range from \$40 to \$150 per hour.

Data Base: CSIRO AUSTRALIS

Operators: CSIRO CILES, 314 Albert St, MELBOURNE VIC 3002

Contact: Graham Jackson (03) 418 7274

Access: Call AUSTRALIS.

Service: AUSTRALIS offers the ability to retrieve and manipulate scientific and technical information. This information concerns Australian scientific and technical developments which until now have been very difficult to obtain. AUSTRALIS can answer questions such as ie. nutritional states of Australian children, who can give me details on SIRAGCROP?, or who is doing research on pepino, babaco, nashi, Kiwi fruit etc.

AUSTRALIS is available throughout Australia on CSIRONET 24 hrs per day, 7 days per week. Initially there are 13 databases available and it expected that this number will grow rapidly.

Charges: Prices are based on a communications charge, a service charge and a database owners royalty. The form of charging is the usual connect hour and offline print charge. Connect hour charges range from \$25-\$75 with the print charges being a few cents per page.

Graham Rees
Extension 3288

5.0 APPLICATIONS DEVELOPMENT - Tony Bird, ext 3944

5.1 Information Concerning Courses

The following courses will be offered during the period November-December 1986:

November

Introduction to IBM	November 3-6 4 half days 9 a.m.-12 noon each day
Conversion to IBM	November 3-5 3 half days 1-12 p.m. each day
SQL	November 10-14 5 half days 9 a.m.-12 noon each day
Programming in BASIC	November 10-14 5 half days 1-4 p.m. each day
SAS	November 17-21 5 half days 9 a.m.-12 noon each day
Conversion to VAX	November 17-18 2 half days 1-4 p.m. each day
Conversion to SPSS-X*	November 20-21 2 half days 1-4 p.m. each day
1022	November 4-28 5 half days 9 a.m.-12 noon each day
SPSS-X**	November 24-28 5 half days 1-4:30 p.m. each day

December

Conversion to IBM	December 1,2,4 3 half days 9 a.m.-12 noon each day
Typesetting	December 1,2,4,5 4 half days 1-4 p.m. each day
Programming in FORTRAN	December 8-12 5 full days 9 a.m.-12 noon 1-4 p.m. each day
SCRIPT	December 15-19 5 half days 1-4 p.m. each day

General Notes:

1. For the IBM system, users should have attended either "Conversion to IBM" (for previous PDP-10 users) or "Introduction to IBM" (for completely new users) before attending other IBM courses.
2. Courses held at St Lucia (with the exception of CAD/CAM courses) are conducted in the Computer Centre's teaching area near the Physics

Annexe. Courses designated (GU) are held in Room 1.50, East Wing, SIA Building at Griffith University.

3. Staff and post-graduate students are admitted free to courses. The charge for other internal users is \$10.00 per half day, \$17.00 per half day for affiliated users, and \$37.00 per half day for external clients.

4. Enrolments for all courses may be made by phoning ext. 3018.

* The course "Conversion to SPSS-X" is designed for those who have worked previously with SPSS and need to know the essential differences between the two packages.

** This course is a FULL course on SPSS-X for those who have used neither SPSS nor SPSS-X previously.

Barry Maher
Extension 3021

5.2 DECUS

The DEC users society (DECUS) publish a monthly newsletter in which contributing members describe their DEC experiences and pass on any useful programs and tips that they have discovered or developed.

Items in the newsletters are grouped according to areas of special interest including Datatrieve, RT-11, RSX, personal computers, networks, artificial intelligence, graphics, education, VAX systems etc.

A short summary of each month's newsletter is kept at the Computer Centre Help Desk, Ground floor, Hawken Building.

Clients who find articles of interest referenced in these summaries, will be given access to the newsletter that contains the article

The newsletters and summaries, however, cannot be removed from the Help Desk area.

Richard Armstrong
Extension 4280

Change of Project Programmer Number Expiry Date

Dept:

PPN's

SYSTEM (KL-10)

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Change Expiry Date to:

Signature:

Change of Project Programmer Number Expiry Date

Dept:

UIC's

SYSTEM (VAX)

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Change Expiry Date to:

Signature:

